



## DEPARTMENT OF TRANSPORTATION

### 14 CFR Part 382

[Docket No. DOT-OST-2019-0180]

#### Accessible Lavatories on Single-Aisle Aircraft: Part 1; Reopening of Comment Period and Public Meeting

**AGENCY:** Office of the Secretary (OST), Department of Transportation (DOT).

**ACTION:** Notice of proposed rulemaking; reopening of comment period; public meeting; request for public comments.

**SUMMARY:** The U.S. Department of Transportation (Department or DOT), jointly with the Architectural Transportation Barriers and Compliance Board (Access Board or Board), is hosting a public meeting, to be held virtually, on a DOT notice of proposed rulemaking (NPRM) issued on January 2, 2020, and on Access Board's proposed advisory guidelines for aircraft onboard wheelchairs issued on August 20, 2019. The NPRM proposed specific measures for improving accessibility of lavatories on single-aisle aircraft for passengers with disabilities. The public meeting will focus on one aspect of this NPRM – improvements to the aircraft's onboard wheelchair (OBW). The meeting will also serve as a means for the Access Board to gather additional information on onboard wheelchair loads and onboard wheelchair casters before finalizing its advisory guidelines for aircraft onboard wheelchairs, which potentially could be a means of complying with OBW performance standards established by the Department. A Notice relating to this joint public meeting and the Access Board's reopening of the comment period for its OBW guidelines is published elsewhere in this issue of the Federal Register.

**DATES:** Public Comments - The comment period on the proposed rule published at 85 FR 27 (Jan. 2, 2020) is reopened from December 16, 2021 (date of public meeting) to January 17, 2022.

Public Meeting - The virtual public meeting is scheduled for December 16, 2021, from 9:30 am to 11:30 am and from 1 pm to 3 pm, Eastern Time. Requests to attend the meeting must be

received by December 9, 2021. Communication access real-time translation and sign language interpretation will be provided, but requests for additional accommodations because of a disability must be received by December 9, 2021. Requests to submit written materials to be reviewed during the meeting must also be received no later than December 9, 2021. If you wish to speak during the meeting, you must submit a request by December 9, 2021. See below, ADDRESSES and FOR FURTHER INFORMATION CONTACT, for the point of contacts for these requests.

**ADDRESSES:** Public Meeting - Requests to attend the meeting must be submitted to [https://usdot.zoomgov.com/webinar/register/WN\\_8PChAZcLQsmDm1xathLEjw](https://usdot.zoomgov.com/webinar/register/WN_8PChAZcLQsmDm1xathLEjw). Requests for additional accommodations because of a disability must be submitted to [OBWpublicmeeting@dot.gov](mailto:OBWpublicmeeting@dot.gov). Requests to submit written materials to be reviewed during the meeting must be submitted to [OBWpublicmeeting@dot.gov](mailto:OBWpublicmeeting@dot.gov). If you wish to speak during the meeting, you must submit a request to DOT at [OBWpublicmeeting@dot.gov](mailto:OBWpublicmeeting@dot.gov). The virtual meeting will be open to the public, subject to any technical and/or capacity limitations, and held via the Zoom Webinar Platform. Virtual attendance information will be provided upon registration. An agenda will be provided to registered participants and placed in the docket in advance of the meeting.

Public Comments - You may file comments identified by docket number DOT-OST-2019-0180 by any of the following methods:

- *Federal eRulemaking Portal:* Go to <https://www.regulations.gov> and follow the online instructions for submitting comments.
- *Mail:* Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Ave. SE, West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- *Fax:* (202) 493-2251.

Instructions: You must include the agency name and docket number DOT-OST-2019-0180 or the Regulatory Identification Number (RIN) for the rulemaking at the beginning of your comment.

All comments received will be posted without change to <https://www.regulations.gov>, including any personal information provided.

*Docket:* For access to the docket to read background documents or comments received, go to <https://www.regulations.gov> and follow the online instructions for accessing the dockets.

**FOR FURTHER INFORMATION CONTACT:** To register and attend this virtual meeting, please contact the Department at:

[https://usdot.zoomgov.com/webinar/register/WN\\_8PChAZcLQsmDm1xathLEjw](https://usdot.zoomgov.com/webinar/register/WN_8PChAZcLQsmDm1xathLEjw). For further information, contact Robert Gorman, DOT Senior Attorney at [robert.gorman@dot.gov](mailto:robert.gorman@dot.gov) or 202-366-9342. You may also contact Wendy Marshall of the Access Board by email at [marshall@access-board.gov](mailto:marshall@access-board.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Background**

In April 2016, the Department established and appointed members to the Advisory Committee on Accessible Air Transportation (ACCESS Advisory Committee or Committee) to negotiate and develop proposed regulations addressing, among other things, accessible lavatories on single-aisle aircraft.<sup>1</sup> During the first meeting, the Department committed to the Committee that if it came to a consensus on the terms of a proposed rule and the Department does not cast a dissenting vote on the consensus product, the Department would exercise good faith efforts to issue a proposed rule reflecting that consensus to the extent possible. The Committee gathered data, conducted meetings and site visits, and engaged in negotiations from May 2016 through November 2016.

On November 22, 2016, the ACCESS Advisory Committee reached consensus on recommendations for new regulatory proposals to improve the accessibility of lavatories on

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<sup>1</sup> A full list of ACCESS Advisory Committee members and other information on the Committee may be found at <https://www.transportation.gov/access-advisory-committee>; see also <https://www.regulations.gov/docket?D=DOT-OST-2015-0246> (ACCESS Advisory Committee docket).

single-aisle aircraft and the Department did not cast a dissenting vote.<sup>2</sup> The accessible lavatory Term Sheet included agreements for both short-term and long-term accessibility improvements. The short-term improvements would be required on new single-aisle aircraft delivered three years after the effective date of the DOT final rule that implements the agreement. The short-term improvements included a proposed requirement that single-aisle aircraft with 125 or more passenger seats would have at least one lavatory with a number of accessibility features, including accessible door locks, flush handles, call buttons, faucets, and assist handles. Single-aisle aircraft with 125 or more passenger seats would also be required to include an OBW that: (1) permits passage in the aircraft aisle; (2) fits within an available certificated OBW stowage space; and (3) accomplishes its functions without requiring modification to the interior arrangement of the aircraft or the lavatory. The Term Sheet called on the Department to “consult with advocates, airlines, aircraft manufacturers, manufacturers of OBW, flight attendant association(s) and other stakeholders in developing these standards,” and to “include the proposed new standards for an OBW and replacement of OBW on existing aircraft as described above in its notice of proposed rulemaking.”<sup>3</sup>

The Department determined that the most appropriate method for developing initial OBW design standards was to seek technical assistance from the Access Board.<sup>4</sup> The Access Board is a Federal agency that specializes in producing accessibility guidelines and standards for the built environment, transportation systems, information and communication technology, and medical diagnostic equipment. On August 20, 2019, the Access Board published in the Federal Register “Proposed Advisory Guidelines for Aircraft Onboard Wheelchairs,” and sought public

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<sup>2</sup> <https://www.transportation.gov/office-general-counsel/negotiated-regulations/final-resolution-access-committee>.

<sup>3</sup> [https://www.transportation.gov/sites/dot.gov/files/docs/Annex%20A.Lav\\_.Agreed%20Text.pdf](https://www.transportation.gov/sites/dot.gov/files/docs/Annex%20A.Lav_.Agreed%20Text.pdf).

<sup>4</sup> <https://www.access-board.gov>.

comment.<sup>5</sup> The Access Board’s guidelines provide design criteria for onboard wheelchair seats, back support, armrests, footrests, movement, stowage, stability, loads, caster wheels, assist handles, and torso and leg restraints. These guidelines provided for the OBW to be backed fully into the lavatory and positioned over the closed toilet so that the lavatory door can be completely closed. The guidelines also provided for the OBW to be maneuvered partially into lavatories in a forward direction to allow users the option to make a stand-and-pivot transfer to the toilet.

The Access Board held a public hearing on these advisory guidelines on September 12, 2019. In response to its proposed guidelines, the Access Board received over 40 comments from various interest groups and stakeholders, including people with disabilities, advocacy groups, aircraft manufacturers, trade associations, manufacturers of onboard wheelchairs, researchers, and others.<sup>6</sup>

On January 2, 2020, the Department published a notice of proposed rulemaking (NPRM) titled “Accessible Lavatories on Single-Aisle Aircraft: Part 1.”<sup>7</sup> This NPRM included proposals for short-term improvements to lavatory accessibility, including new proposed requirements for OBWs. In developing its own proposed rules for OBWs, the Department started with the Access Board’s design-based guidelines and adapted them into more flexible performance standards. The performance standards were designed to allow manufacturers to find efficient and innovative means for meeting performance expectations. At the same time, the proposed rule states that airlines may use the Access Board’s advisory guidelines for technical assistance in furnishing an OBW that meets the Department’s performance standards.

Under the proposed rule, OBWs meeting the new standards must be installed on new single-aisle aircraft with an FAA-certificated maximum capacity of 125 seats or more that enter

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<sup>5</sup> See 84 FR 43100; <https://www.federalregister.gov/documents/2019/08/20/2019-17873/advisory-guidelines-for-aircraft-onboard-wheelchairs>. The Access Board’s Docket for OBW standards is found at <https://www.regulations.gov/docket?D=ATBCB-2019-0002>.

<sup>6</sup> See Docket No. ATBCB-2019-0002 at <https://www.regulations.gov/docket/ATBCB-2019-0002>.

<sup>7</sup> See 85 FR 27; <https://www.federalregister.gov/documents/2020/01/02/2019-27631/accessible-lavatories-on-single-aisle-aircraft-part-1>.

service three years after the effective date of a final rule issued by the Department in this proceeding. The proposed rule would require the OBW to be designed in such a manner as to enable the OBW to completely enter the lavatory in a backward orientation. Specifically, the proposed rule would require the OBW to fit over the closed toilet lid in a manner that permits the lavatory door to close completely. It is anticipated that the attendant would push the OBW backward into the lavatory by means of handles on the front of the OBW. After the OBW is situated over the closed toilet lid, the door would be closed and the passenger would be able to perform non-toileting lavatory functions in privacy.

The proposed rule would also require that the OBW be designed such that it could, at a minimum, partially enter the lavatory in a forward orientation. The purpose of this provision is to facilitate a stand-and-pivot maneuver from the OBW to the toilet seat, for passengers who are able to do so. With a stand-and-pivot maneuver, the passenger would partially enter the lavatory by means of the OBW, stand up, and pivot 180 degrees to reach the toilet seat.

The proposed OBW rule also contained safety elements. For example, the proposed rule would require that the height of the OBW seat must align with the height of the aircraft seat to the maximum extent practicable, in order to permit a safe transfer between the OBW and the aircraft seat. The proposed rule would require the wheels of the OBW to lock in the direction of travel, in order to avoid contact with aircraft seats and other obstructions as it moves down the aisle. Any other moving parts of the OBW would need to be capable of being secured such that they do not move while the occupied onboard wheelchair is being maneuvered. The wheels would also be required to lock in place so as to provide stability during transfers. The OBW would be required not to tip or fall in any direction under normal operating conditions when occupied for use.

The OBW would also be required to have a padded seat and backrest, in order to preserve skin integrity, and to prevent spasticity and injury.<sup>8</sup> The proposed rule would also require the OBW to be free of sharp or abrasive components. The OBW would also be required to have arm supports that are sufficient to facilitate transfers; arm supports that are repositionable to permit unobstructed transfers between the OBW and the aircraft seat; torso and leg restraints to ensure stability and prevent injury; as well as a unitary foot support that would provide adequate clearance over the lavatory threshold and also allow for an unobstructed transfer between the OBW and the lavatory. Under the proposed rule, restraints would be operable by the passenger in order to permit the passenger the option to adjust the restraints unassisted. Finally, the proposed rule would require the OBW to have instructions prominently displayed for proper use.

In keeping with the ACCESS Advisory Committee's Term Sheet, airlines would not be required to modify aircraft interiors, including lavatories and existing OBW stowage spaces, in order to comply with these OBW provisions. The Department sought comment on all aspects of this critical issue of OBW stowage space. Specifically, the Department sought further data regarding: (1) The folded dimensions of OBWs currently in use on single-aisle aircraft; (2) the locations and dimensions of current OBW stowage spaces; and (3) the feasibility of designing and constructing an OBW that meets the listed performance standards, particularly including the ability to enter the lavatory in a backward orientation, while fitting into the existing OBW stowage space for that aircraft. The Department also sought comment on an alternative proposal: Whether to require OBWs to meet the new performance standards set forth in the NPRM even if stowage space must be expanded to accommodate the OBW. The Department sought comment on the costs of expanding OBW stowage spaces to meet these performance standards.

Again in keeping with the ACCESS Advisory Committee's Term Sheet, the proposed rule provided that an airline would not be responsible for the failure of third parties to furnish an

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<sup>8</sup> DOT specifically sought comment on whether the proposed rule text adequately conveys the degree of back support and seat support necessary to properly accommodate passengers with disabilities, and if not, whether additional standards should be specified.

OBW that complies with these proposed standards, so long as the airline notifies and substantiates to the Department the efforts it expended to obtain compliant OBWs. The Department recognized that, at present, no commercially available OBW exists that permits backward passage into an aircraft lavatory, and that while airlines may seek to procure an OBW that meets the Department's performance standards, airlines do not design or produce OBWs themselves.<sup>9</sup>

Finally, the proposed rule provided that if an airline replaces an OBW on an aircraft with an FAA-certificated maximum capacity of 125 seats or more three years after the effective date of the rule, then the replacement OBW must comply with DOT's new OBW standards. The Department sought comment on all aspects of the OBW proposal, including costs, benefits, and feasibility.

The comment period to the NPRM closed on March 2, 2020. The Department received relatively few comments about OBW design, and almost no comments that estimated the costs of developing or manufacturing an OBW that would comply with the standards set forth in the proposed rule. Certain disability advocates argued, among other things, that the Department's OBW standards should have tracked more closely the Access Board's design standards.<sup>10</sup> Representatives of the airline industry contended that the Department failed to take into account considerations such as aviation safety and the impact on flight attendants of unpacking, using,

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<sup>9</sup> The Department sought comment on whether there should be a deadline for an airline to notify the Department that the airline has expended its efforts to obtain compliant OBWs, and if so, how many days after an airline becomes aware of such commercial unavailability (e.g., 30 days) would be appropriate for airlines to notify the Department. The Department also recognized the uncertainties surrounding the issue of whether OBWs meeting the Department's new standards can fit within existing OBW stowage spaces. The intent of the proposal was to encourage innovation in meeting the proposed standards by affirmatively requiring airlines to engage in reasonable efforts to obtain compliant OBWs from third parties. The Department sought comment on whether the "reasonable efforts" clause is the most appropriate means of reaching the overarching goal of ensuring that OBWs with the new accessibility features are acquired.

<sup>10</sup> See, e.g., Comment of Paralyzed Veterans of America, <https://www.regulations.gov/comment/DOT-OST-2019-0180-0335>, at 5.



and stowing the OBW while in flight.<sup>11</sup> They also argued that the Department failed to adequately consult with stakeholders before issuing its OBW proposal.<sup>12</sup> The Department received no comments from OBW manufacturers.

### **Announcement of Public Meeting**

Under these circumstances, the Department is of the view that it is appropriate to hold a public hearing to gather additional information on all aspects of OBW design before issuing any final binding regulation on the topic. The Department also finds that the public meeting will be an appropriate vehicle for the Access Board to gather additional information before it finalizes advisory guidelines for OBWs.

### Questions Relating to DOT's NPRM regarding OBW design

The Department seeks further information on all aspects of its NPRM relating to OBW design, including but not limited to:

- Whether the proposed OBW design elements adequately address accessibility concerns;
- The cost and feasibility of designing, manufacturing, and implementing compliant OBWs;
- The cost of developing and implementing procedures for training crew in unloading, using, and stowing the OBW;
- The dimensions of current OBW stowage spaces in single-aisle aircraft;
- Whether OBWs that meet the Department's proposed accessibility standards can be stowed in existing stowage spaces; and
- Aviation safety considerations relating to unloading, using, and stowing the OBW while in flight.

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<sup>11</sup> See, e.g., Comment of Airlines for America, <https://www.regulations.gov/comment/DOT-OST-2019-0180-0337>, at 2-3.

<sup>12</sup> Id.

We specifically invite disability advocates, airlines, aircraft manufacturers, manufacturers of OBWs, flight attendant associations, and other stakeholders to participate in the public meeting. We also encourage stakeholders and participants to file written materials in the docket when the comment period reopens, which will be from December 16, 2021 (date of public meeting) to January 17, 2022. The Department considers this public meeting, along with its prior actions in this matter, to satisfy the consultation provisions set forth in the ACCESS Advisory Committee's Term Sheet.

#### Questions Relating to Access Board's Proposed Voluntary Design Standards

As stated earlier, the public meeting will also allow the Access Board to gather additional information regarding its advisory guidelines containing recommended dimensions and other technical specifications for a comfortable and functional aircraft onboard wheelchair. More specifically, the Access Board is seeking additional information regarding onboard wheelchair loads and onboard wheelchair casters.

##### *Onboard Wheelchair Loads*

The overall weight capacity or load of current onboard wheelchairs varies greatly and ranges from approximately 200 to 800 pounds. In trying to determine the appropriate load, the Board looked to its *Guidelines for Aircraft Boarding Chairs* (1987), which recommends that seats support at least 723 pounds (weight of a 99th percentile male with a 3.0 safety factor). See <https://www.access-board.gov/research/completed-research/guidelines-for-aircraft-boarding-chairs>. Using updated anthropometrics, the weight of a 99th percentile male with a 3.0 safety factor would be 826 pounds. See Department of Health and Human Service Centers for Disease Control and Prevention's Anthropometric Reference Data for Children and Adults: United States, 2011-2014, Table 6, Line 1 (Aug. 2016). However, the boarding chair (used to transfer a passenger from their personal wheelchair to the airplane seat) is different than the proposed onboard wheelchair, in that a boarding chair does not need to fold for storage on the aircraft or require a cantilever design.

The Board is not aware of existing industry standards for onboard wheelchairs that are designed to allow over-the-toilet positioning. In its proposal, it reserved provisions for loads pending further information as to what loads are appropriate for an onboard wheelchair design that accomplishes the proposed functions.

Comments from the public, including aircraft manufacturers, recommended that the Board's guidelines reference load specifications in standards issued by SAE International, "Foldable On-Board Wheelchairs for Passengers with Disabilities," ARP 4120C (Stabilized 2013)." The SAE standard specifies loads for onboard wheelchair seats, seat backs, arm and foot supports, wheels, and assist handles. These referenced provisions are publicly available (read-only, not for distribution) until the close of the comment period on January 17, 2022, on SAE International's website at: [https://www.sae.org/binaries/content/assets/cm/content/standards/arp4120c\\_review.pdf](https://www.sae.org/binaries/content/assets/cm/content/standards/arp4120c_review.pdf).

Based on its review of the comments on the proposed guidelines, the Board is considering referencing the SAE International's standard for loads for seats (3.2.9.1), arm supports (3.2.9.3), foot support (3.2.9.4), casters (3.2.9.2), and assist handles of onboard wheelchairs (3.2.9.6). The Board seeks comment on whether the loads specified in the SAE International ARP 4120C Standard are appropriate for an onboard wheelchair design that allows the chair to be positioned over the closed lavatory toilet. Alternatively, what other loads should be specified?

#### *Onboard Wheelchair Casters (Size)*

The guidelines require that caster wheels of onboard wheelchairs move independently to facilitate maneuvering within the confined space of aircraft aisles and lavatories. For safety and stability, the guidelines also require each caster to have wheel locks and swivel locks. In its proposal, the Board sought comment on whether the guidelines should specify a minimum size for caster wheels so that they are large enough to readily travers thresholds at lavatory entrances. Most commenters recommended that the guidelines specify a performance requirement instead

of a minimum caster size. However, the impact of thresholds may be significant since the front assist handles will be used to back occupied onboard wheelchairs into lavatories and to pull them back out. What is the minimum caster wheel diameter that would ensure stability of the occupied onboard wheelchair and allow the chair to easily traverse the lavatory doorway threshold pushing it in and pulling it out of lavatories using only the front assist handles? The Board also requests information on the standard height of lavatory thresholds on single-aisle aircraft with 125 or more passenger seats.

### **Viewing Documents**

You may view documents mentioned in this notice at <https://www.regulations.gov>. After entering the docket number (DOT-OST-2019-0180), click the tab labeled “Browse & Comment on Documents,” and choose the document to review.

Issued in Washington, DC, on or about this 9th day of November, 2021.

**John E. Putnam,**

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*U.S. Department of Transportation.*

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